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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/383,318 08/26/99 BELGHUITH

K 6004.200-US

EXAMINER

HM12/1017

SLOBODYANSKY, E

ART UNIT

PAPER NUMBER

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1652  
DATE MAILED:

13  
10/17/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/383,318**

Applicant(s)  
**Belghuith et al.**

Examiner  
**Elizabeth Slobodyansky**

Group Art Unit  
**1652**



☒ Responsive to communication(s) filed on Aug 11, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 13, 15-17, and 22 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 13, 15-17, and 22 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **DETAILED ACTION**

The amendment filed August 11, 2000 amending the specification to insert references to the sequence identifiers, canceling claims 1-12, 14 and 18-21 and amending claims 13, 16, 17 and 22 has been entered.

The substitute Sequence Listing and the computer readable form thereof filed August 11, 2000 have been entered.

Claims 13, 15-17 and 22 are pending.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Oath/Declaration***

The spelling of the first inventor's name in the Declaration is different from the spelling thereof in the publications.

Clarification is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by Belghith-Srih.

Belghith-Srih discloses *xyIA* gene from *Streptomyces* sp. SK (GenBank accession Y15518) that is 100% identical to SEQ ID NO:1 of the instant invention (page 35, line 29).

Presently it is unclear whether 262 bp upstream from the coding region of SEQ ID NO:1 are sufficient to direct the production of the polypeptide in a host cell. The rejection is done under presumption that said 262 bp are sufficient to direct the production.

Claims 13, 15-17 and 22 rejected under 35 U.S.C. 102(b) as being anticipated by Belghith et al.

This rejection was explained in the Office action mailed April 26, 2000.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belghith-Srih.

As discussed above, Belghith-Srih discloses *xylA* gene from *Streptomyces* sp. SK (GenBank accession Y15518) that is 100% identical to SEQ ID NO:1 of the instant invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add control sequences to the Y15518 sequence if the upstream 262 bp do not include them, insert the resulting sequence into an expression vector and to produce a glucose isomerase encoded by the Y15518 sequence by expressing said vector in a host cell. One skilled in the art would have been motivated to produce a glucose isomerase in such way in order to carry out the large scale production of pure glucose isomerase.

### ***Response to Arguments***

Applicant's arguments filed August 11, 2000 have been fully considered but they are not persuasive.

With regard to 102(b) rejection, Applicants argue that "nucleic acid described by Belghith et al. had not been deposited in a public depository and thus was not in the public domain" (page 4, penultimate paragraph). They further assert that "an anticipating reference must describe the patented subject matter with sufficient clarity

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..." (page 4, last paragraph). This is not persuasive because Belghith et al. describe the DNA from the same source, with the same restriction map, encoding an enzyme with the same properties and having the same name as the enzyme and the encoding DNA of the instant invention. The disclosure of sequences is irrelevant because the sequences are inherent to the disclosed clone. They are enabled because they can be obtained from *Streptomyces* sp. SK using a 500 bp DNA fragment from the 5' end from *xylA* from *S. olivochromogenes* (page 555, 1st column, penultimate paragraph). There is no evidence of record that *Streptomyces* sp. SK was not in the public domain.

The rejection of claims 13 and 22 under 35 U.S.C. 112, first paragraph, is withdrawn in view of the amendment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky whose telephone number is (703) 306-3222. The examiner can normally be reached Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy, can be reached at (703) 308-3804. The FAX phone number for Technology Center 1600 is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Center receptionist whose telephone number is (703) 308-0196.



Elizabeth Slobodyansky, PhD  
Primary Examiner